

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having Raised Quarter, Bridge and Forecastle Decks.

Port of Survey Aberdeen.

Date of Survey when building

Name of Surveyor T. Richardson

Particulars of Classification 100.A.1.

GWENTHILLS (Type of Superstructures.)

Ship's Name CELTIC QUEEN Nationality and Port of Registry British new port. Man. Official Number 162144 Gross Tonnage 865 Date of Build 1937

Moulded Dimensions: Length 197'7" Breadth 30'6" Depth 18'3" R.Q.D. 14'29"

Moulded displacement at moulded draught = 85 per cent. of moulded depth = 1544 tons

Coefficient of fineness for use with Tables .738

Depth for Freeboard (D) Moulded depth 18'3" R.Q.D. 14'29" Stringer plate 34' R.Q.D. Deck Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$

Depth for Freeboard (D) = 14'32"

Depth correction (a) Where D is greater than Table depth (D - Table depth) R = $(14'32" - 13'14") 1.520 = + 1.75$ (b) Where D is less than Table depth (if allowed) (Table depth - D) R = ✓

If restricted by superstructures ✓

Round of Beam correction Moulded Breadth (B) = 30'5" Standard Round of Beam = $\frac{B \times 12}{50} = 7.32$ Ship's Round of Beam = 8" Difference Excess = .68 Restricted to Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.68}{4} \times .2380 = -.04$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...	<u>.50</u>				
R.Q.D. enclosed ...	<u>112'6"</u>	<u>112.50</u>	<u>4'0"</u>	<u>✓</u>	<u>112.50</u>
" overhang ...					
Bridge enclosed ...	<u>11'0"</u>	<u>11.00</u>	<u>7'0"</u>	<u>✓</u>	<u>11.00</u>
" overhang aft ...					
" overhang forward ...	<u>23'44"</u>				
F'cle enclosed <u>19'11"</u> ...	<u>23.9</u>	<u>23.44</u>	<u>7'0"</u>	<u>✓</u>	<u>23.44</u>
" overhang ...	<u>7'7"</u>	<u>3.28</u>		<u>✓</u>	<u>3.28</u>
Trunk aft ...	<u>6'56"</u>				
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	<u>153.83</u>	<u>150.55</u>			<u>150.55</u>

Standard Height of Superstructure	<u>6.00</u>
" " R.Q.D.	<u>3.650</u>
Deduction for complete superstructure	<u>25.76</u>
Percentage covered $\frac{S}{L} =$	<u>77.86</u>
" " $\frac{S_1}{L} =$	<u>76.20</u>
" " $\frac{E}{L} =$	<u>76.20</u>
Percentage from Table, Line A.	<u>70.63</u>
(corrected for absence of forecastle (if required))	
Percentage from Table, Line B.	<u>✓</u>
(corrected for absence of forecastle (if required))	<u>✓</u>
Interpolation for bridge less than 2L (if required)	<u>✓</u>
Deduction = $25.76 \times .7063 =$	<u>18.19</u>

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>29.76</u>	1		<u>29.76</u>	<u>35'3"</u>	<u>39.95</u>	1		<u>39.95</u>
$\frac{1}{2}$ L from A.P. ...	<u>13.24</u>	4		<u>52.96</u>	<u>16'2"</u>	<u>14.48</u>	4		<u>71.12</u>
$\frac{2}{3}$ L " ...	<u>3.24</u>	2		<u>6.54</u>	<u>4'2"</u>	<u>4.39</u>	2		<u>8.78</u>
Amidships ...	<u>-</u>	4		<u>-</u>	<u>✓</u>	<u>-</u>	4		<u>-</u>
$\frac{2}{3}$ L from F.P. ...	<u>6.55</u>	2		<u>13.10</u>	<u>9'2"</u>	<u>9.25</u>	2		<u>18.50</u>
$\frac{1}{2}$ L " ...	<u>26.49</u>	4		<u>105.96</u>	<u>32'2"</u>	<u>32.45</u>	4		<u>131.00</u>
F.P. ...	<u>59.52</u>	1		<u>59.52</u>	<u>72'2"</u>	<u>42.45</u>	1		<u>42.45</u>
Total ...				<u>264.84</u>					<u>342.10</u>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{74.26}{18} \left(.75 - \frac{3893}{3604} \right) = -1.49$

If limited on account of midship superstructure. ✓

Actual height of R.Q. Deck = 4.00
Standard " " " " = 3.65
Excess = .35
= 4.2"

Mean actual sheer aft = Excess
Mean standard sheer aft = Excess

Length of enclosed superstructure forward of amidships = > .1L

" " aft of " = > .1L

Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.

RAISED QUARTER Ft.
Depth to Freeboard Deck = 18'32"
Summer freeboard = 4'48"
Moulded draught (d) = 13'84"

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 3'46" = 3'2"

Addition for Winter North Atlantic Freeboard (if required) = 5'2"

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 1832$

Tons per inch immersion at summer load water line

$T = 12.18$

Deduction = $\frac{\Delta}{40T}$ inches

= $3.76 = 3'3\frac{1}{4}"$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.738 + .68}{1.36} = \frac{1.418}{1.36}$

Depth Correction ... 1.75

Deduction for superstructures ... 18.19

Sheer correction ... 1.49

Round of Beam correction04

Correction for Thickness of Deck amidships ... 48.00

Other corrections, scantlings, etc. ... -

22.69
23.66

49.75 19.42 + 30.03
Summer Freeboard = 53.69

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:-

Tropical Fresh Water Line above Centre of Disc ... 1'4"

Fresh Water Line " " ... 3'3/4"

Tropical Line " " ... 3'1/2"

Winter Line below " " ... 3'1/2"

Winter North Atlantic Line " " ... 5'1/2"

Tropical Fresh Water Freeboard ... 3'10 1/2"

Fresh Water " " ... 4'2"

Tropical " " ... 4'2 1/4"

Winter " " ... 4'9 1/4"

Winter North Atlantic " " ... 4'11 1/4"

19 MAY 1937

Gwent Hills

Particulars of fiddle, funnel and ventilator coamings :—
 Stone Hold gratings, covered by strong steel hinged covers. ✓
 Fiddle, funnel and ventilators are in efficient condition ✓
 Engine skylight of steel, strongy constructed, with steel sashes and prismatic lights.
 Canvas cover provided. ✓

now filled. ✓

Entrance to Bridge accommodation, through steel house on Bridge Deck, Stairway 3'6" x 2'3".
Door into Deck House 4'6" x 1'10" Teak. 1 1/2" frames, 7/8" panels. 18" steel. Door operated both sides.

1. Ventil. on Forecastle Deck 15" diam. Coaming 36" x 36" Led to Hold. ✓
 2. " " " 6" " " 12" x 36" " " Crew Space.
 3. " " R. Quarter 15" " " 36" x 36" " " Hold. ✓
 4. " " Bridge Deck (MUSH) 6" " " 6" above Wood Deck. ✓

all vents constructed in accordance with the Rules and coamings closed with Tin covers, also Canvas Covers. ✓

Particulars of Air Pipes in exposed positions on Deckboard, raised quarter, of upper deck, etc.

1.	W.I.	air pipe on forecastle D ^t .	18 high x 4 diam ^{rs} .	from Fore Peak Tank.	✓
1.	"	" " " 8 ft. 0 in. forward.	36 " x 3 " "	" No. 1. C. D. B. Tank.	✓
2.	"	" " " R. Quarter D ^t .	30 " x 2½ " "	" " 2 " "	✓
1.	"	" " " " " "	30 " x 2½ " "	upper after Peak Tank.	✓
1.	"	" " " " " "	30 " x 2½ " "	Lower " " "	✓

all air pipes have bends at top and are closed with screwed plugs, attached with chains. ✓

none fitted. ✓

All Deck scuppers are cut through Gunwale Bars, above Freeboard and Quarter Dk. ✓
 4" diam. Discharge from Crews W.C. forward. Cast Steel. G.M. Stem valve on ship's side, cut 4'6" below 3rd Dk. ✓
 4" " " " Officers W.C. in Casings. " " " " " " " " " " 5'6" " Qr. " ✓

8" diam.	16	Crew space, in forecabin, fitted with ringed Deadlights.	✓
8" "	"	Bridge accommodation.	" " " "
10" "	"	front Bulkhead.	" " " "
all sections of substantial construction.			

Steel Bulwarks on Deckboard etc. in forward Well.	4:0 high, efficiently constructed and supported.	✓
" " " Quarter "	3:4 " " " " "	✓
" " " Bridge "	3:0 " " " " "	✓

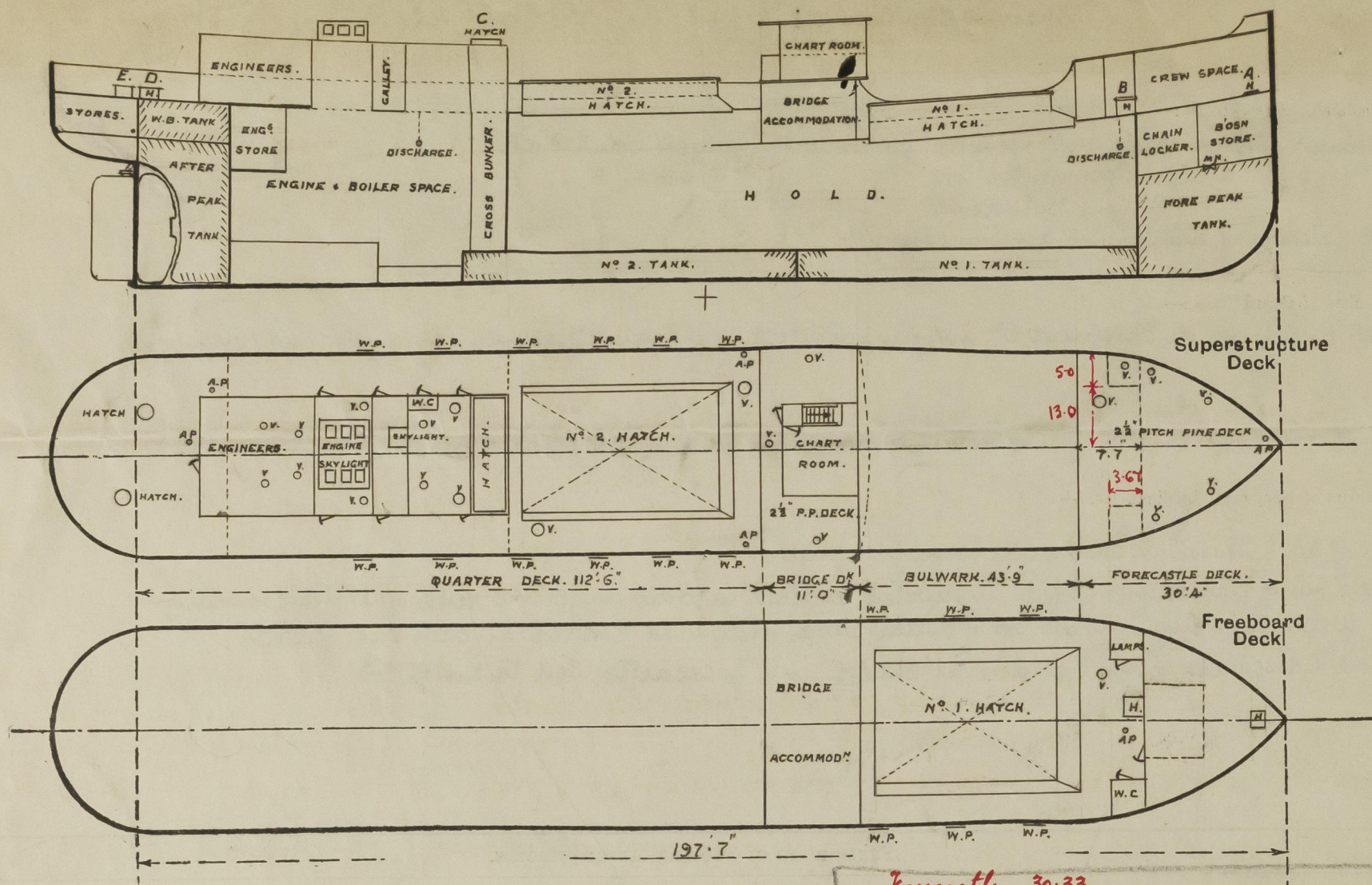
Guard rails on Pile St. 3'0" high, with 2 rods and slanchions spaced 4'6" apart. ✓

Top of No. 1. Hatch in fore well forms gangway. /
One row of stanchions fitted in riveted sockets in bulb angle on side of hatch coaming
in well, 2' 9" high, above top of hatch, with steel wire lashed at each end of well.
Wood gangways from ladders at bridge and forecable, led to hatch top. /

Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings.
Poop Bulkhead								
Raised Quarter Deck Bulkhead ...	30"	30"	3" x 3" x 30" A. 6" x 3" x 34" B.A. in line with Hatch Sides.	27" to 36"	✓ 15" Brackets	one 7" Circle top & bottom	✓	11' 0" R. Q. D. N.
Bridge, After Bulkhead								
Bridge, Forward Bulkhead	24"	30"	6" x 3" x 34" B.A.	30"	Rings Top & Bottom	10" Circle	✓	7' 0"
Forecastle Bulkhead	28"	28"	3" x 3" x 28" A.	about 30"	✓	one 14' 6" x 21' 4"	18"	7' 0"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Deck board or Raised Quarter Deck ...	32"	29"	3 1/2" x 3" x 32" A	24" to 32"	Brackets at Casing Top.	2 @ 4' 6" x 1' 10" S.H. 2 @ 4' 6" x 1' 10" R.H. 1 @ 1' 0" x 1' 6" Bottom on starboard side.	18"	7' 0"
Exposed Machinery Casings on Super- structure Decks								
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances								
Deckhouses on Flush Deck Ships ...								

[illegible]

Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shewn on the following sketches:—



Newcastle 30.33
 1.58
 22.45
 3.67 x 5.0 = 1.02
 18.0
 23.44 equiv.
 30.33
 23.44
 6.56 overhang.

State any special features in the construction of the ship:—

This vessel is intended for the home coasting trade.
 Timber Freeboard not required.

The vessel surveyed during construction. I.E. Report will follow on completion.

~~The particulars given herewith (where relating to items not yet fitted) are, as proposed by the Builders, and the completion of same, will be advised, together with verification form.~~

~~Particulars of Displacement etc, as received from the Builders.~~

~~External Disp^t at 13.0 mean draft 1690 Tons. Tons per inch = 12.04.~~

~~" " " 13.5 " " 1763. " " " = 12.11.~~

~~" " " 14.0 " " 1836. " " " = 12.18.~~

Plans of Profile & Section as approved, forwarded herewith for reference, also plan of Wash Ports & Wire lashings on Hatches. (4)

Builder's name and yard number. Messrs John Lewis & Sons Ltd. yard No. 142. (now building)

Names of sister ships. "GLENARRIFF"

Owners. Morley San & Co. Ltd. Newport Mon.

Fee £ 8 0 0 Received by me



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